

Applicants: Heeres, et al.
Application No.: 10/537,037
Filed: June 1, 2005
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REMARKS

Prior to the present Amendment, Claims 1-14 were pending. Claims 1-9 and 13-14 have been cancelled and new Claims 15-24 have been added. Accordingly, Claims 10-12 and 15-24 are pending.

Rejections under 35 U.S.C. §101

In the office action, the Examiner rejects Claims 1-9 as directed to non-statutory subject matter and claim 14 as failing to set forth steps in a process claim.

Applicants have cancelled Claims 1-9 and 14. Accordingly, Applicants respectfully request the examiner withdraw the rejections under §101.

Rejections under 35 U.S.C. §112, second paragraph

In the office action, the Examiner rejects claim 14 as indefinite.

Applicants have cancelled claim 14. Accordingly, Applicants respectfully request the examiner withdraw the rejection under §112, second paragraph.

Rejections under 35 U.S.C. §112, first paragraph – written description

In the office action, the examiner rejects Claims 1-14 as lacking support in the specification. Specifically, the examiner states that “the specification does not provide any description of any potato plant having at least one *amf* gene said potato plant further provided with an increased capacity to store a protein as characterized by a protein content of its tubers of at least 1.9% m/m” (see office action, page 4, second full paragraph).

The examiner also states that the methods for breeding a potato as set forth in Claims 10-12 lack written description.

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The claims to the potato in Claims 1-9 and 13 are cancelled. Claim 14 is also cancelled.

With respect to Claims 10-12, support can be found in original claim 10. Page 5, lines 21-27, of the specification literally describes this claim thereby providing literal support which is greater than required by the MPEP¹. Furthermore, page 6, line 34 to page 8, line 10, of the specification describes the crossing of a parent potato with at least one *amf*-allele with a second potato plant without an *amf*-allele. The wild-type potato was homozygous for *Amf*-gene (see page 8, lines 3-4), *i.e.*, a potato without an *amf*-allele. Methods for determining the protein level of a potato are described in detail on page 9, lines 1-23. Accordingly, direct support for the claimed invention is found in the written description. This support conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, Applicants were in possession of the invention as now claimed.

Accordingly, Applicants respectfully request the examiner withdraw the rejection of the claims under 35 U.S.C. §112, first paragraph written description.

Rejection under 35 U.S.C. §112 – enablement

In the office action, the examiner rejects Claims 1-14 as failing to comply with the enablement requirement. Specifically, the examiner states that the claims are broadly drawn to any potato plant having at least one *amf* gene said potato plant further provided with an increased capacity to store a protein as characterized by a protein content of its tubers of at least 1.9% m/m (office action, page 5, paragraph 1 under Enablement.)

With respect to enablement, page 6, line 34 to page 8, line 10, of the specification describes the crossing a parent potato with at least one *amf*-allele with a second potato plant without an *amf*-allele as presently claimed. Page 9, lines 1-23 describe the method of

¹ See MPEP §2163.02 The subject matter of the claim need not be described literally (*i.e.*, using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.

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determining the protein content of the tubers. Finally, Tables 2 and 3 each describe the coagulated protein content of the progeny of a parent potato with at least one *amf*-allele with a second potato plant without an *amf*-allele.

The results of Tables 2 and 3, located on pages 11 and 12 respectively, identify the coagulated protein content of various genotypes identified in the potato progeny, thereby enabling the pending claims.

As discussed above, the claims are supported and enabled by the specification. Accordingly, Applicants respectfully request the examiner withdraw the rejection of the claims under 35 U.S.C. §112 – enablement.

Rejection under 35 U.S.C. §§ 102/103

In the office action, the examiner rejects Claims 1-13 as anticipated under §102(b) or obvious under §103(a) in view of Jacobsen et al (Euphytica 44:43-48, 1989) *Jacobsen*. Specifically, the examiner states that “Jacobsen et al teach a potato having at least one amf gene . . . a method for breeding and selecting a potato plant comprising crossing a first parent potato with at least one amf-gene with a second parent potato without an amf-gene and selecting progeny” (office action page 8).

With regard to the rejection under §102(b), in order to anticipate, a reference must teach each and every element of a claimed invention (See MPEP §2131). The examiner states “Jacobsen et al is silent regarding increased capacity to store a protein” (office action, page 8, line 3). The pending independent claim requires testing protein levels of progeny and selecting progeny with protein levels greater than those of the parent potatoes. *Jacobsen* does not mention protein in any context. *Jacobsen* does not even imply any sort of action regarding potato protein level. Accordingly, since, *Jacobsen* does not teach every element of the claimed invention, *Jacobsen* does not anticipate the pending claims.

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The examiner also rejects the claims under §103(a). Specifically, the examiner states “it would have been obvious to one of ordinary skill in the art that increased capacity to store a protein would be important in potatoes and that a protein content of at least 1.9% is a design choice that would vary depending of the individual goals of the breeder.” (See office action, page 8, lines 5-8.) The examiner then states “where the prior art product seems to be identical to the claimed product, except that the prior art is silent as to a particularly claimed characteristic or property, then the burden shifts to the Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention.” (See office action page 8, second paragraph.)

As presently claimed, the invention requires testing the protein level of the progeny prior to successive breeding. The protein level of the progeny must be greater than that of the parents. *Jacobsen* is silent regarding elevated protein levels in *amf* mutants. Furthermore, one would not find it obvious that an *amf* mutant would have increased protein content.

Progeny exhibiting increased protein content relative to the parent potatoes is an element of the claimed invention. This element of the claim is not disclosed by, nor is it obvious in view of *Jacobsen*. Accordingly, since there is an element of the claim, which is not disclosed or obvious, there is no *prima facia* case.

Therefore, Applicants respectfully request that the examiner withdraw the rejections under 35 U.S.C. §§102(b), 103(a).

New Claims

In the present amendment, new Claims 15-24 have been added. Support for claim 15 can be found throughout the specification, as well as in the original claims, for example, page 5, line 25, and page 9 lines 1-23.

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Support for the new claims can be found throughout the specification. For example, support for Claims 16-22 can be found at page 4, lines 6-17, which describe a potato plant having at least one *amf*-gene and increased capacity to store protein as measured by the amount of coagulating protein. Tables 2 and 3 on pages 11 and 12 demonstrate coagulated protein content of various progeny genotypes possessing at least one *amf*-allele.

Support for new Claims 23 and 24 can be found, for example, on page 4, lines 18-22; page 14, line 28-31; Examples 1 and 2, and Table 4.

If the examiner has any questions or concerns regarding this amendment, he or she is invited to contact the undersigned at the telephone number listed below. If any fees are due or any over overpayment made in connection with this paper, please charge or credit our Deposit Account No. 08-2461.

Respectfully submitted,

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